Generative AI's Impact on Pharmaceutical Marketing

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EXECUTIVE SUMMARY

Generative AI is revolutionizing pharmaceutical marketing with its potential for efficiency, creativity, and personalization. Capable of producing entire marketing campaigns, the technology is driving excitement across the industry with promise of significant impact. Its rapid adoption, fueled by successful deployment in various business applications, highlights its capability to significantly enhance marketing strategies and operational efficiency.

The technology has already been widely applied in marketing, with a notable emphasis on personalization. This use has improved engagement rates and reduced costs across different sectors. For marketers, generative AI's ability to quickly produce high-quality varied content will drive a shift toward more innovative and efficient marketing practices.

In the pharmaceutical sector, the potential for generative AI is particularly striking, with expectations of generating significant value up to $30 billion. However, the industry's regulated nature calls for a cautious approach, emphasizing the need for AI-assisted compliance tools to streamline content review. By adopting a phased-maturity roadmap, pharma companies can leverage generative AI for a range of applications, from enhancing productivity to pioneering personalized patient engagement, all while maintaining rigorous compliance standards. This careful, innovative approach promises to responsibly unlock generative AI's full potential in pharmaceutical marketing.

In January, a video on LinkedIn surprised many pharmaceutical marketers. It was a Polish ad promoting Maxon Forte, an OTC sildenafil-containing erectile-function drug from Adamed that starts with this line: "Imagine you want to pick up a colleague."

But that line wasn't the most shocking part: the video is 100% AI-generated. AI made mood boards, storyboards, actors, and still images, then animated everything. Just over a year after ChatGPT's launch, AI is generating entire drug commercials.

So, it's no surprise there's so much excitement in the industry about generative AI. The technology promises efficiency and speed and new creative and personalized marketing opportunities. According to some reports, the impact could be substantial, worth up to $30 billion. But how to navigate the opportunities and challenges? Informed by decades of experience applying related technologies in life sciences and our early work with generative AI for clients, here's our point of view:

RAPID ADOPTION AND PROVEN PRODUCTIVITY IMPACT

The term "generative AI" has come to include both machine learning models that create content (like OpenAI's GPT models) and tools that incorporate them (like ChatGPT). The models learn to produce new, contextually relevant content through a combination of surprisingly simple algorithms, terabytes of data, and petaflops of computing. Through this process, they gain surprising emergent abilities, like writing code and using tools like search engines.

ChatGPT's launch on November 30, 2022, arguably demarcates the generative AI era despite the existence of earlier generative models—including earlier versions of the GPT large language models that underpin it. The combination of a user-friendly chat interface and an improved model fine-tuned for conversation, instruction-following, and human preferences drove rapid adoption. ChatGPT is helpful, versatile, and easy to use. By January 2023, just two months after launch, it had over 100 million users, making it the fastest-growing consumer application in history. For comparison, it took TikTok about nine months and Instagram over two years to reach the same milestone.
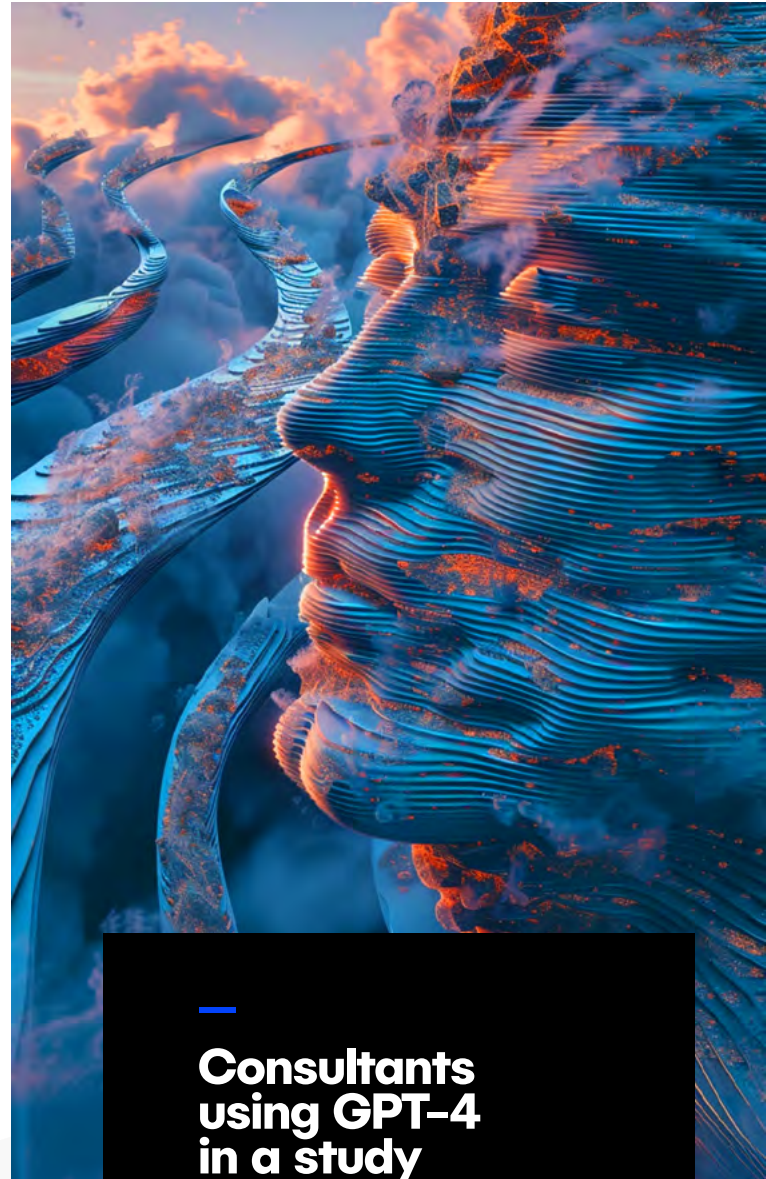
Consultants using GPT-4 in a study were significantly more productive, completing **12.2% more** tasks, **25.1% faster**, at over **40% higher** quality.

Of course, consumer use doesn't equal business impact. But an early business-use case for generative AI has been quantifiably impactful: writing code. [Research by GitHub](#) on the dominant tool GitHub Copilot found it helps developers complete tasks about 55% faster. This tangible impact has driven rapid adoption. By October 2023, [according to Microsoft CEO Satya Nadella](#), GitHub Copilot had over one million paying users across 37,000 organizations.

And generative AI's impact isn't just tactical. A [September 2023 study](#) by researchers, including generative AI thought-leader Ethan Mollick, showed that it can also benefit consulting work, which tends to be more strategic. Consultants using GPT-4, the state-of-the-art language model available in paid versions of ChatGPT, were significantly more productive, completing 12.2% more tasks, 25.1% faster, at over 40% higher quality.
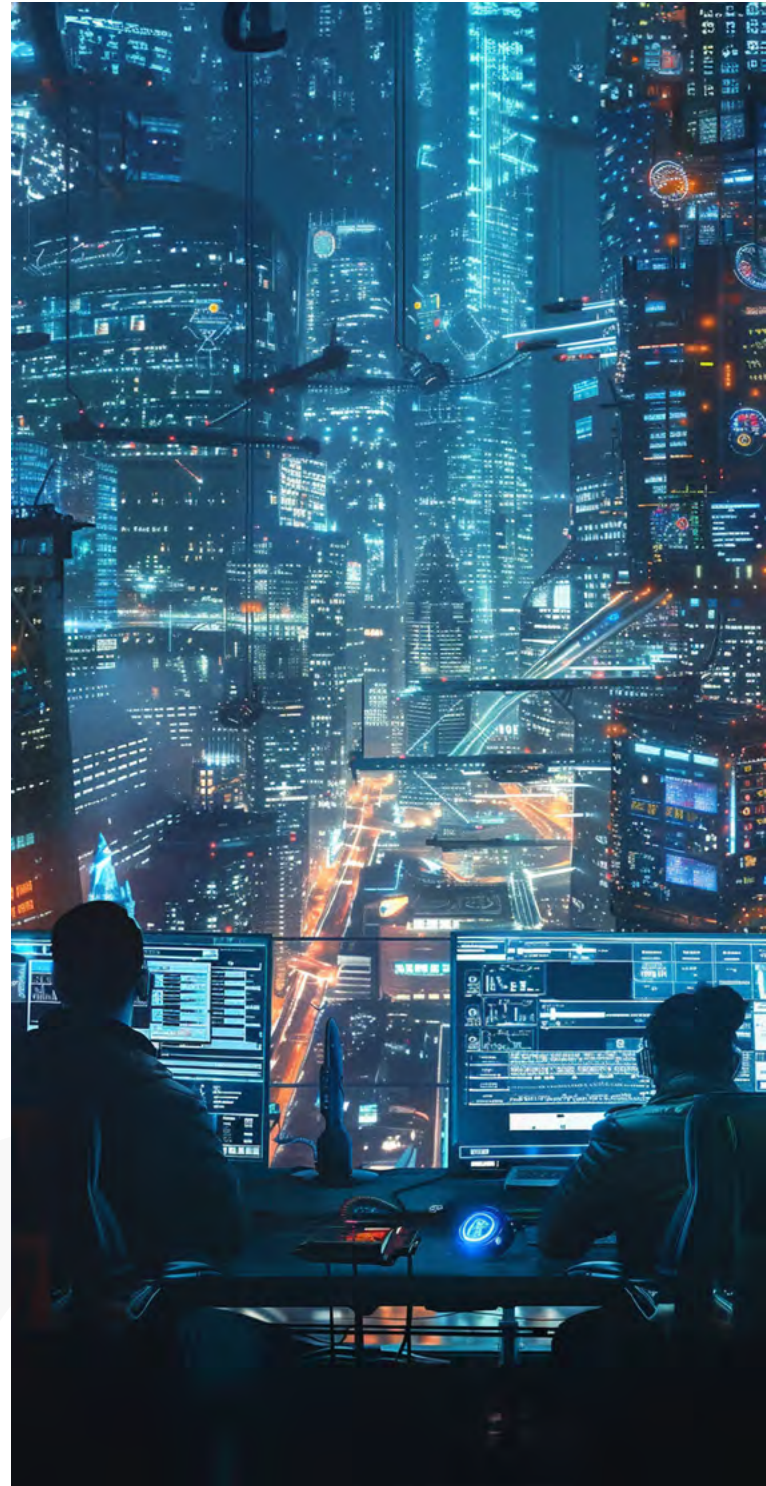
A NATURAL FIT
FOR MARKETING

Before examining the potential impact of generative AI on pharmaceutical marketing, let's look at its implications for marketing in general.

A June 2023 survey by Boston Consulting Group—just seven months after ChatGPT's launch—found that 70% of chief marketing officers (CMOs) said their organizations already used generative AI, with applications in content generation, insight generation, and market segmentation. Almost all these CMOs (91%) saw a positive or very positive impact on efficiency.

The most significant focus has been personalization, with two-thirds of BCG survey respondents doing something in this area. McKinsey reports an example of a European telecommunications company that used generative AI to personalize messaging for 150 market segments, driving a 40% lift in response rates and a 25% reduction in deployment costs. One of the best examples I've seen is an AI landscape-design startup that sent personalized postcards to people with an AI-powered redesign of their front yard.

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Besides personalizing content, generative AI also assists in creating content faster that is higher quality and has greater variety. Research by Deloitte Digital shows that early adopters of generative AI in content marketing see a 12% return on investment and free up content teams to focus on more strategic tasks.

And these are just the earliest use cases. We're now seeing marketers use generative AI for market research summaries, natural language analytics queries, synthetic personas, brainstorming, storyboards, mood boards, concept designs, virtual avatars, and more, as well as experimenting with producing in-market assets using image generation, video generation, and audio-generation models.

UNLOCKING PHARMA POTENTIAL WITH A COMPLIANCE COPILOT

Pharmaceutical marketing is equally ripe for generative AI. A McKinsey Global Institute report estimates that generative AI could produce $60 to $110 billion in value for the pharmaceutical and medical products industry. They predict that the most value, $18 to $30 billion, will come from commercial applications, including personalized content creation, sales representative assistance, strategic-insight generation, and patient-experience optimization.

But in a heavily regulated domain like pharmaceutical marketing, it's critical to first deploy the technology to help with medical, legal, and regulatory review—a "marketing compliance copilot." Review teams already face challenges with their workload, and reviewing even existing customization matrixes for a small number of market segments can be burdensome. What will happen when generative AI increases the amount and complexity of content? Submissions will overwhelm even the most efficient review team, causing a significant bottleneck.

That's why a compliance copilot is an essential first tool. It must go beyond what foundation models and chatbots offer, and be:

- **Purpose-built** for compliance
- **Up to date and continuously updated** to reflect regional, company, and brand regulatory guidelines and precedents
- **Transparent and explainable**, using and referencing explicit rules to make and analyze its compliance findings and recommendations

Brand teams and their agencies can then use such a tool to unleash the potential of generative AI for content development, repurposing, and personalization.

Generative AI could produce $18 to $30 billion in value for pharma commercial applications.

PHARMA MARKETING MATURITY ROADMAP

With a compliance copilot in place, organizations can leverage generative AI in various ways depending on their level of maturity. Below are some common-use cases aligned to maturity levels, though this list is not exhaustive, partly because new tools and technologies are continuously being developed.

Foundational

At this level, initiatives are lower risk from a compliance perspective, technically easy to deploy, and essential to build upon. They include:

- **Policies:** rules and guidelines governing the use of AI tools, encompassing facets like data privacy and responsible application

- **Literacy:** comprehensive training sessions and workshops to build foundational knowledge in generative AI capabilities, use, and limitations, preparing employees to integrate the technology into daily tasks

- **Productivity Enhancement:** deployment of tools like Copilot for Microsoft Office 365, Duet for Google Workspace, and ChatGPT Enterprise to automate and assist routine-task completion

- **Market Vigilance:** continuously monitoring advancements in generative AI and evaluating new tools and vendors to stay ahead in the market and identify new experimentation opportunities

Developing

Initiatives at this level are only possible with a strong foundation, as they require more compliance oversight and are more complicated to technically implement. They include:

- **Compliance Assistance:** generative AI tools that streamline the regulatory review process, reducing manual effort while maintaining high-accuracy and compliance standards (see the expanded description above)

- **Natural Language Analytics:** leveraging large language models' ability to translate questions into queries and code to provide insights, reports, and charts on demand

- **Competitive Analysis:** generating insights on competitors' strategies, market positioning, and assets to inform strategic decision-making

- **Synthetic Personas:** using market research data to create virtual patients and healthcare professionals for activities such as message testing and sales training

- **Interactive Training Modules:** simulations of real-world scenarios that sales representatives and other field staff might encounter

- **Creative Ideation:** generating innovative ideas and concepts for marketing campaigns, enhancing human creativity with AI-generated suggestions

Advanced

These initiatives require a regulatory team well-versed in generative AI and ideally assisted by it, along with greater investment in technology. The significant presence of a human in the loop distinguishes them from more pioneering activities. They include:

- **Tailored Customer Engagement:** personalizing customer communications, enhancing engagement and the effectiveness of marketing efforts through customized messaging. Early opportunities include expanding communications to currently underserved markets due to the ability to customize content at a low cost

- **Expanded Content Production:** leveraging generative AI to increase the production of lower-profile content, such as social media posts, while using an AI-augmented review process and human reviewers to ensure compliance

- **Representative Copilots:** equipping sales teams and medical liaisons with generative AI tools that help find, summarize, and synthesize relevant information they can communicate to healthcare professionals

Pioneering

Initiatives here require significant maturity and a greater appetite for innovation, as they're at the leading edge of what's feasible from a technology and compliance standpoint. They include:

- **Real-Time Compliance Guardrails:** continuous compliance monitoring in customer-facing applications and large-scale asset generation. Builds on having an AI-powered compliance copilot in place. Enables AI-powered frontline communications

- **Frontline Communications:** introducing chatbots for direct customer interaction, providing instant support. Incorporates compliance copilot to guard against inappropriate messages

- **Campaign Assets:** generating high-profile campaign assets, including copy, visuals, video, and audio

RESPONSIBLE EXPERIMENTATION

As demonstrated above and in our daily experiences, generative AI will profoundly impact marketing and virtually every aspect of our lives. Its ability to enhance creativity, personalize communication, and streamline processes promises not just increased efficiency but a rethinking of marketing strategy and execution. In pharma, we must balance innovation with rigorous compliance to harness the technology's full potential responsibly and effectively.

As we look ahead, we should embrace a spirit of discovery. This is uncharted territory. Working in an industry built on innovation and discovery, we should experiment, learn, and share. With that motivation in mind, we look forward to blazing trails, navigating new paths, and seeing all the novel and interesting uses to come.

Ready to leverage AI to elevate your business? Reach out to learn how Klick can make it happen.

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H E A L T H

Connect with us to share your thoughts
or learn more about this topic by
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